

PASSION FRUIT SENSORY EVALUATION HELPS GROWER SELECTION DECISIONS

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Situation

Passion fruit (*Passiflora edulis*) contains variation within the species, affecting characteristics such as size, shape, color, aroma, and flavor. A lack of marketing research about which varieties of passion fruit consumers prefer can significantly affect passion fruit grower planting decisions. Determining which varieties consumers prefer can lead to increased demand for passion fruit and encourage passion fruit production in Florida.

Objectives

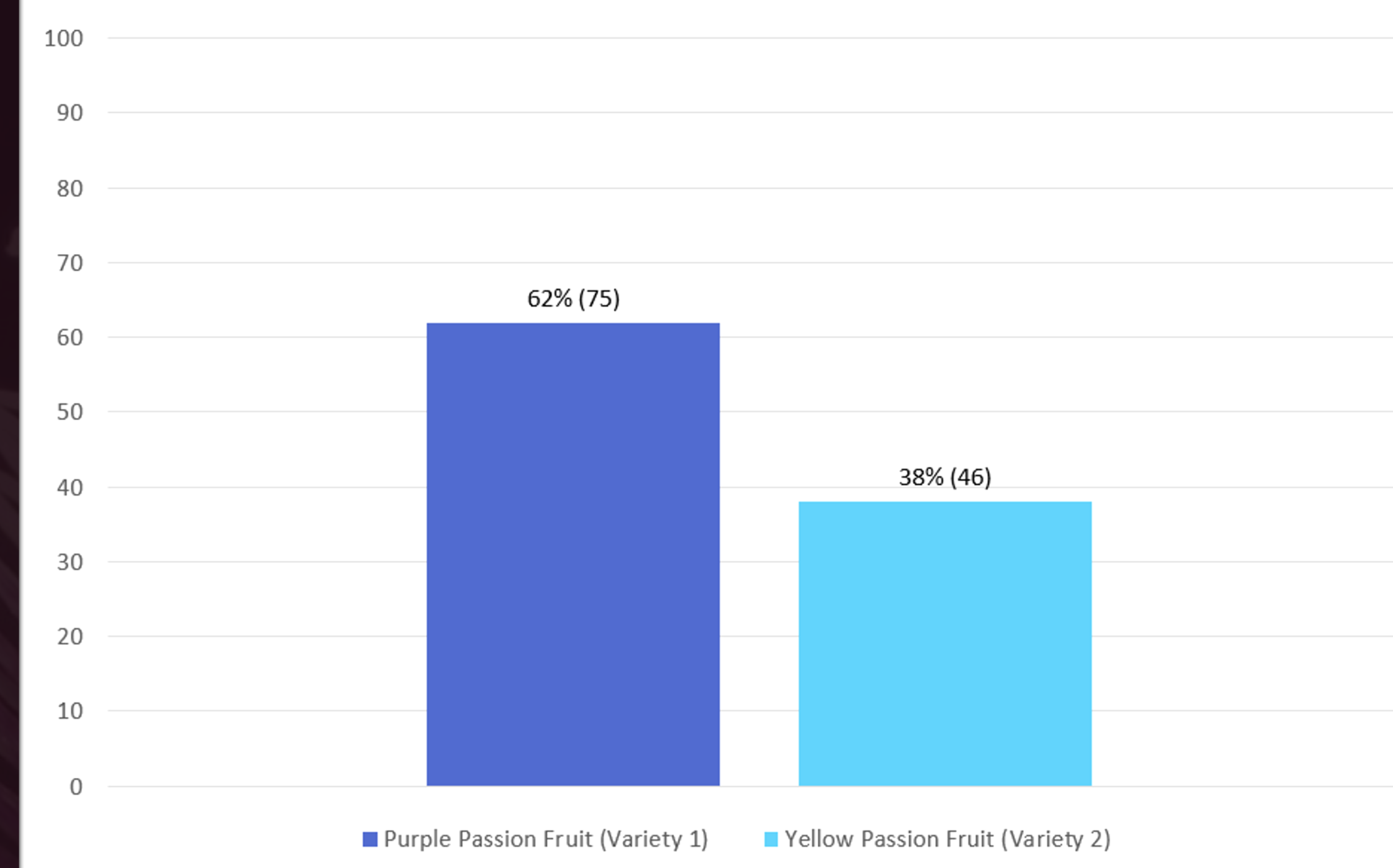
To gauge potential consumer interest in different passion fruit varieties, a sensory evaluation of two passion fruit varieties was conducted in Marion County, FL at the Ocala Downtown Market.



Methods

Participants were provided with a fresh samples of two different passion fruit varieties. They were then provided with a QR code that lead to an anonymous sensory evaluation survey. This survey asked the participants he following: If they had previously consumed fresh passion fruit or any passion fruit product. Participants were provided with a “likability” rating from 1 to 9 with 1 being “dislike very much and 9 being “like very much” with gradations in between. The survey asked the participants to evaluate the two fresh samples based upon appearance, aroma, flavor, and over all preference individually. They were then asked which variety of passion fruit they preferred over the other.

Preferred Passion fruit Variety



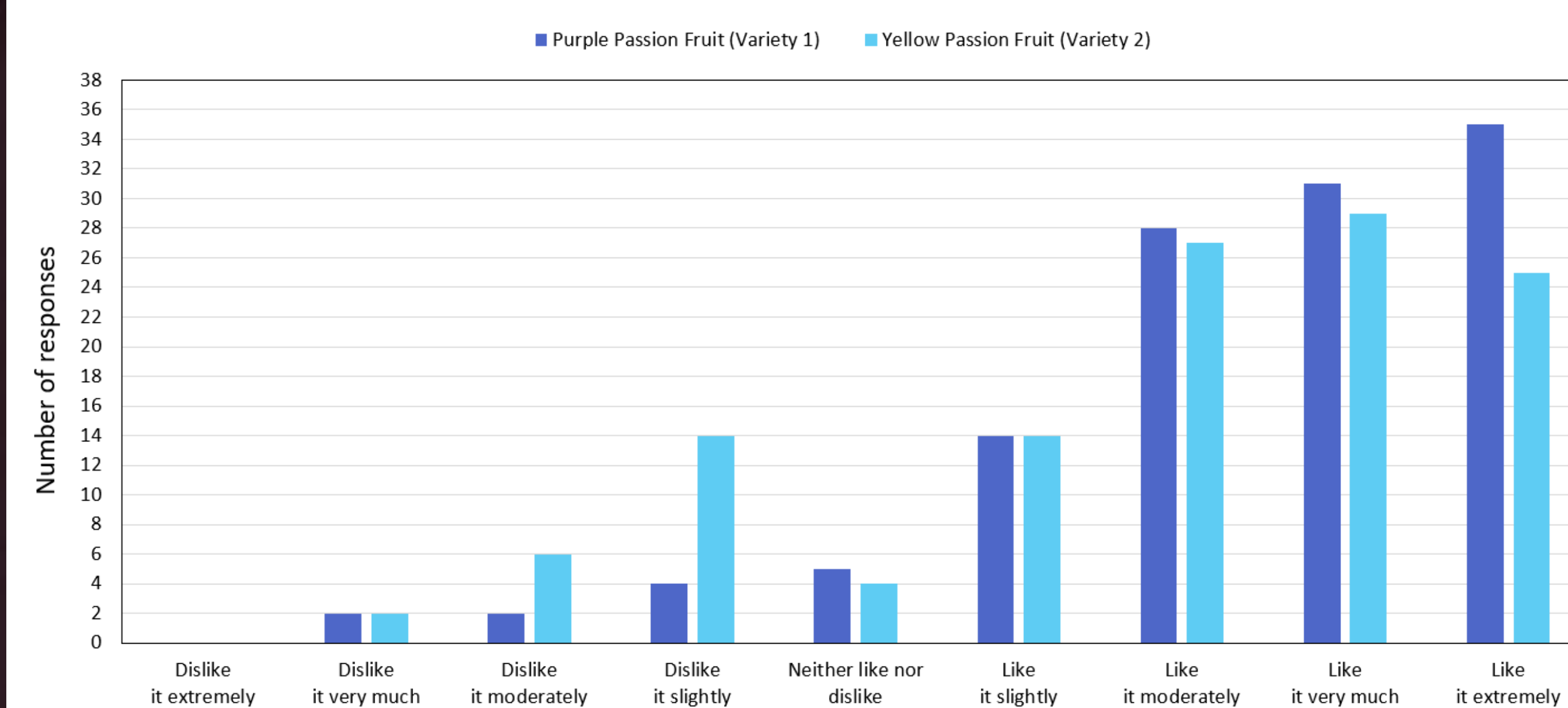
Results

Participants evaluated samples of a purple (P) and yellow (Y) variety. The purple variety used was Purple Possum and the yellow variety was Yellow Ruby. Participants provided the following ratings: overall appearance 7.4 (P) and 7.6 (Y), aroma 7.8 (P) and 7.5 (Y), flavor 7.4 (P) and 6.7 (Y), and overall liking 7.4 (P) and 6.8 (Y). When asked if they preferred one over the other, participant results showed 62% preference for the purple variety over a 38% preference for the yellow variety. The juice received a 7.4 flavor liking. Participants indicated 89% would buy FL passion fruit if it were available. Maximum prices they would be willing to pay: \$1-2 (44%), \$2-3 (44%), \$3-4 (12%).



Sensory evaluation participants were provided with two varieties of passion fruit, which were evaluated based upon appearance, aroma, flavor, texture, and over all liking. Additionally, a passion fruit juice product as was also evaluated.

Overall Liking - Crosstabulations



Conclusions

For fresh fruit growers, marketing information can be as important as production methods. This sensory evaluation provides essential marketing information to current and prospective growers about consumer preferences for two different passion fruit varieties. Similar sensory evaluations can be applied to other crops, which can help growers make informed planting decisions. Planting varieties that consumers prefer can aid in the economic sustainability of a farm operation.